

11 AF

PTO/SB/21 (01-08)

Approved for use through 05/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/723,396
Filing Date	November 26, 2003
First Named Inventor	Ping-Wha Lin
Art Unit	3663
Examiner Name	Ricardo Palabrica
Attorney Docket Number	121048-0006

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Return Postcard Certificate of Mailing
<div>Remarks</div>		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Butzel Long		
Signature	<i>Michael S. Gzybowski / TTM</i>		
Printed name	Michael S. Gzybowski		
Date	May 5, 2008	Reg. No.	32,816

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	<i>Nancy Dembach</i>		
Typed or printed name	Nancy Dembach	Date	May 5, 2008

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Appl. No. 10/255,216



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

<i>Group</i>		}	<u>Certificate Under 37 CFR 1.8(a)</u>
<i>Art Unit:</i>	3663	}	
<i>Attorney</i>		}	I hereby certify that this correspondence is being
<i>Docket No.:</i>	121048-0006	}	deposited with the United States Postal Service as first
<i>Applicant:</i>	Ping-Wha LIN	}	class mail in an envelope addressed to: Commissioner
<i>Invention:</i>	FUEL CELLS THAT OPERATE ON	}	for Patents, P.O. Box 1450, Alexandria, VA 22313-
	NUCLEAR REACTIONS PRODUCED	}	1450.
	USING RAPID TEMPERATURE	}	
	CHANGES	}	
<i>Serial No:</i>	10/723,396	}	on <u>5-5-08</u>
<i>Filed:</i>	November 26, 2003	}	
<i>Examiner:</i>	Ricardio Palabrica	}	

REPLY BRIEF

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer mailed March 3, 2008 in connection with the above-identified application appellant submits the present Reply Brief.

In the Examiner's Answer the Examiner insists on comparing appellant's method to the cold fusion process of Fleischmann and Pons. In this regard the Examiner states that:

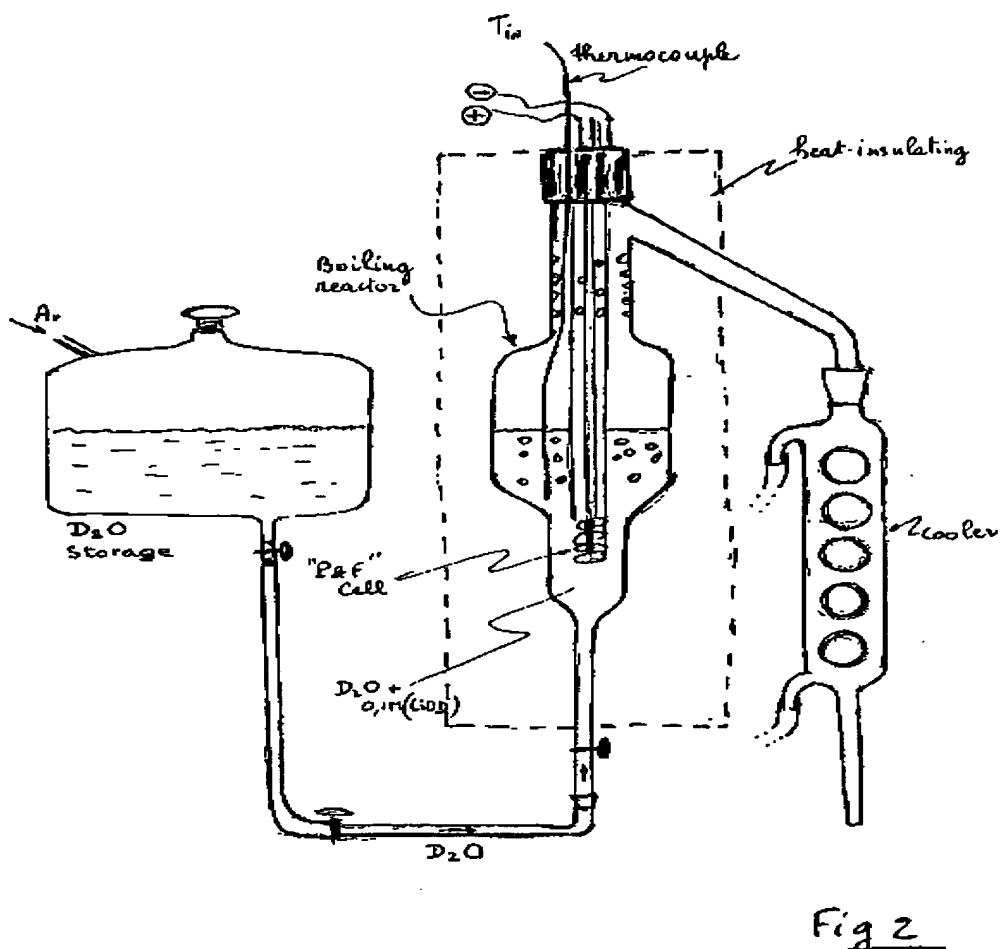
Appellant's invention is thus, at most, no more than a variation of the cold fusion concept or system set forth by F and P. (Examiner's Answer, page 4, last line through page 5, line 2.)

Further the Examiner cites *In re Dash* as holding:

...no rule that forbids the Examiner from relying on related technology, anecdotal information, or sources that are not peer reviewed to establish inoperability.

As explained in appellant's response filed June 4, 2007, Fleischmann and Pons involves the use a batch process. If the heat production is excessive (from nuclear fusion), the heavy water in the cell will evaporate. Therefore, from common sense, the heat production from the process is very small. So even if there is heat production, it is insignificant and inconsequential, and not attributed to nuclear reactions.

A diagram of the experimental apparatus used by Fleischmann and Pons is presented as follows:



A detailed explanation of this experimental apparatus can be found at <http://jnaudin.free.fr/coldfus/index.htm>.

As can be seen, the cold fusion process of Fleischmann and Pons involves an electro-chemical process. Fleischmann and Pons failed to explain the mechanism of how the reactions happened. Moreover, their results could not be substantiated by the third parties attempting to test results. The heat released is small according to the experimental results.

The manner of producing continuously excess heat according to the present invention is not based on inoperative concept of cold fusion as set forth by Fleischmann and Pons.

Rather, the manner of producing continuously excess heat according to the present invention is based upon Lin's Theory of Flux which is explained in appellant's specification. Lin's Theory of Flux serves as the basis for patents in China and the United Kingdom based upon applications that correspond to the present application.

Further, the appellant, Mr. Lin, presented numerous papers and presentations on Lin's Theory of Flux worldwide, including at the International Conference on Power Engineering 2007, October 23-27, Hangzhou, China. The Conference was organized by international power industries from the United States, Japan, and China. To date there has been no challenge adverse to Lin's Theory of Flux.

As presented in appellant's specification and as claimed, appellant's method is practiced in a simple reactor and does not involve the complicated apparatus and procedure of Fleischmann and Pons.

Thus, appellant respectfully disagrees with the Examiner's comparison of Fleischmann and Pons with appellant's invention and the conclusion that the lack of credibility of Fleischmann and Pons applies to appellant's invention.

To the contrary, appellant's inventive method is quite simple and described in sufficient detail so that those skilled in the art can practice appellant's invention. Furthermore, although not required, appellant has thoroughly explained the theory behind his invention and has also provided a detailed explanation as to how his theory (Lin's Theory of Flux) applies to the experimental results of his invention.

In the Examiner's Answer, the Examiner questioned appellant's conclusion that nuclear

reactions occur in appellant's claimed method. The Examiner specifically notes that in order to create a hydrogen plasma, a temperature "at least an order of magnitude higher than appellant's case and even much higher" is required.

Fusion reactions involve D-T (deuterium-tritium) or D-D (deuterium-deuterium) reaction. Deuterium is plentiful in ocean water (one deuterium atom in every 3500 molecular of water). Current fusion power that is in development relies upon heating hydrogen isotopes to more than 100 million degrees Celsius, until they fuse into heavier nuclei. The process is very complicated and costly; and it involve the huge "Tokamak" facility (the doughnut-shaped vacuum chamber in which the plasma is confined by magnetic field). It can not operate continuously, and does not have any practical application.

Appellant's process is based on "Lin's Theory of Flux" and the "Principles of Conversion from Equilibrium Reaction to Non-equilibrium Reaction" (both disclosed and discussed in appellant's specification) for its development. Appellant's process does not require the application or the type/degree of high temperature environment required by the conventional fusion process. Since appellant's process is operated at a relatively low temperature environment as compared with the currently available fusion processes, appellant refers to his process as a cold fusion process; however, it is not the type of cold fusion process promoted by Fleischmann and Pons

Appellant's process has been systematically proven to be a fusion process as follows:

Assuming that the fusion reaction most likely occurring in appellant's reactor involves isotopes of hydrogen, namely deuterium and tritium, the tabulated results in the working

examples indicate that moisture (H_2O) in the air forced through the reactor has been completely split or separated into hydrogen and oxygen. Further the hydrogen atoms have been completely changed into protons by forcing the electrons from their orbits. Next the mutual bombardment of electrons and protons produce neutrons, deuterons and other species.

It can further be concluded from the working examples that the moisture (H_2O) in the air has been separated into hydrogen and oxygen because there is no reduction of SO_x in the gas flow. It can also be concluded from the working examples that the hydrogen atoms have been completely changed into protons because if any elemental hydrogen were present it would rapidly recombine with oxygen to form water which again would cause a reduction of SO_x . Since SO_x concentration in the gas flow in the reactor remains constant, hydrogen atoms have been completely changed into protons.

The large energy production in the gas flow that occurs during the mutual bombardment of electrons and protons (to produce neutrons, deuterons and other species) causes the rapid temperature increase of the gas flow in the reactor.

On page 9 of the Examiner's Answer the Examiner states:

There is neither an adequate description nor enabling disclosure as to how and in what manner Appellant could categorically conclude that such temperature increase was due to nuclear reactions.

35 U.S.C. §112, first paragraph states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

There is nothing in this section of the Code that requires appellant to provide a description or enabling disclosure that supports his conclusions as to the scientific principles that cause the results of his invention. It is enough that appellant provides a written description that enables those skilled in the art to make and practice his invention. Appellant has met these requirements of the Code.

On page 10 of the Examiner's Answer the Examiner infers that appellant failed to consider pressure as a parameter in his conclusions. In response it is noted that the disclosed and claimed reactor is a flow-through system so that there is no provision for containing pressure.

On page 12 of the Examiner's Answer the Examiner states:

Appellant appears to be basing the operativeness of his invention on various approximations, estimates, assumptions, etc....

While appellant attempted to set forth what he believes to be the scientific principles that cause the results of his invention, such detailed explanations are not actually required or required to be understood by an applicant.

On page 18 of the Examiner's Answer the Examiner seems to be arguing that if water molecules were to evaporate they would disappear. This is not understood. Further it is submitted that water molecules would not adhere to the hot walls of the reactor.

On page 20 of the Examiner's Answer the Examiner argued that electrons are atomic particles and not nuclear particles. Appellant explained how electrons are freed from hydrogen atoms so as to be present.

CONCLUSION

For the reasons advanced above and set forth in appellant's brief on appeal, appellant respectfully contends that the rejections of claims 1, 11 and 23 through 25 under 35 U.S.C. first and second paragraph are improper inasmuch as appellant's disclosure satisfies these sections of the statute.

Further for the reasons advanced above and those set forth in appellant's brief on appeal, appellant respectfully contends that the rejections of claims 1, 11 and 23- 25 under 35 U.S.C §102(b) as being anticipated by Lin is improper as the examiner has not met his burden of establishing that Lin anticipates the present invention as claimed.

Reversal of each of the rejections on appeal is respectfully requested.

Respectfully submitted,

Michael S. Gzybowski / TTM

Michael S. Gzybowski
Reg. No. 32,816

BUTZEL LONG
350 South Main Street
Suite 300
Ann Arbor, Michigan 48104
(734) 995-3110